

**GUNNISON FIREMEN'S PENSION FUND**

**Actuarial Valuation as of January 1, 2015**

# ACTUARIAL CONSULTING GROUP

Gunnison Firemen's Pension Fund  
P. O. Box 239  
Gunnison, Colorado 81230

Ladies and Gentlemen:

Actuarial Valuation as of January 1, 2015

Gunnison Firemen's Pension Fund

In accordance with the provisions of Colorado Revised Statutes 31-30, the Actuarial Consulting Group performed an actuarial valuation of the Gunnison Firemen's Pension Fund as of January 1, 2015.

The valuation was based on unaudited financial and Member data which were prepared by your organization and the Plan provisions that were in effect as of the valuation date. In my opinion, all costs and liabilities included in this report:

1. Present fairly, in all material respects, the actuarial position of the Pension Fund as of the valuation date,
2. Are consistent with current benefit provisions and other benefit limitations for Volunteer Firefighter Pension Funds,
3. Were determined in accordance with generally accepted actuarial principles and procedures,
4. Comply with current Colorado pension funding procedures and regulations, and
5. Are based on actuarial assumptions that are reasonably related to the experience of the Plan, and to reasonable expectations, and that represent at this time the best estimate of anticipated long-term experience under the Plan.

To the extent that actual contributions to the Pension Fund equal or exceed the requirements of Colorado Law, as determined by this Actuarial Valuation, the Pension Fund will be actuarially sound.

Respectfully submitted,

ACTUARIAL CONSULTING GROUP

*Paul W Barker*

Paul W. Barker, F.S.A.  
Enrolled Actuary No. 886

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COMPARISON OF ACTUARIAL VALUATION RESULTS  
CURRENT AND PREVIOUS VALUATIONS

A summary and comparison of the principal results from the current and previous actuarial valuations for the Gunnison Firemen's Pension Fund are outlined below:

Monthly Benefit Level	\$235 per Month	\$300 per Month	\$350 per Month	\$300 per Month
Investment Return	6.00%	6.00%	6.00%	6.00%
	<u>January 1, 2011</u>	<u>January 1, 2013</u>	<u>January 1, 2015</u>	<u>January 1, 2015</u>
Active members	34	35	29	29
Vested terminated lives	2	1	1	1
Retired lives and beneficiaries	34	34	37	37
Total	70	70	67	67
Total Actuarial Liability	\$1,516,769	\$2,054,607	\$2,401,273	\$2,058,234
Pension Fund Assets	1,520,739	1,775,654	2,128,371	2,128,371
Unfunded Actuarial Liability	(\$3,970)	\$278,953	\$272,902	(\$70,137)
Normal Cost	\$13,200	\$28,497	\$28,211	\$24,181
Normal Cost per Active Member	\$388	\$814	\$973	\$834
<u>Funding Requirements</u>				
Normal Cost plus 30 year pay off of Unfunded Actuarial Liability	\$12,928	\$47,616	\$46,915	\$19,374
Entry-Age Full Funding Limit	\$9,230	\$307,450	\$301,113	(\$45,956)
<u>Contributions</u>				
Actuarially Determined Contributions	\$12,928	\$47,616	\$46,915	\$19,374
Expected Contributions	\$130,480	\$124,260	\$124,260	\$124,260
<u>Funding Margins</u>				
Annual Contributions**	\$130,480	\$124,260	\$124,260	\$124,260
Future 30-Year Funding Surplus	\$117,280	\$95,763	\$96,049	\$100,079
Downside Asset Protection	\$1,715,170	\$1,118,298	\$1,128,522	\$1,530,362

\*\*Based on expected 2015 expected contributions

## COMMENTS ON VALUATION RESULTS

Estimated Pension Fund contributions for the current calendar year are as follows:

+ Gunnison Fire Protection District taxes**	\$65,400
+ State of Colorado contributions	<u>58,860</u>
+ Estimated contributions	\$124,260

To the extent that expected contributions exceed Funding Requirements the Fire Protection District's Pension fund will be actuarially sound, and can continue to offer benefits that are above Colorado Revised Statutes 31-30-415 minimums.

### Fund Benefit Levels

A review of the basic \$350.00 monthly retirement benefit indicates that the current level of expected contributions will support a basic monthly retirement benefit of \$400.00. An increase in benefits may be considered at this time since the District's expected contributions are projected to be higher than levels required to sustain the Pension Fund on an actuarially sound basis as prescribed by the Colorado Revised Statutes. Furthermore, the difference between expected contributions and the 30-year funding requirement is large enough to allow the fund to sustain a "shock" asset value loss of more than \$1,128,000 and still meet requirements for the \$350.00 benefit rate.

### Investment Return Assumption

The Actuarial Funding Discount Rate has been 6.00% from 2011 to 2015. Average investment return for the last five years has been 9.17%. A change in the discount rate is not required at this time. Asset value used to determine funding requirements continues to be Market Value.

GOVERNMENT ACCOUNTING STANDARDS BOARD STATEMENT NO. 67

The Governmental Accounting Standards Board (GASB) issued a new statement Number 67 effective for periods starting after June 15, 2013, titled "Financial Reporting for Pension Plans - An Amendment of GASB Statement No. 25" (GASB No. 67).

GASB No. 67 requires funding status to be measured based on the Actuarial Assumptions and the Actuarial Cost Method adopted by the Pension Board. The City has adopted the Entry-Age Cost Method to develop costs and liabilities for funding purposes. Actuarial Assumptions shown on Exhibit 2 were used in making the required calculations of costs and liabilities.

Under the Entry-Age Cost Method, the target value for Plan Assets is the Total Actuarial Liability, which is developed by this method as the excess, if any, of the Present Value of Future Benefits over the Present Value of Future Normal Costs at the Valuation Date. For this purpose, Plan Assets are considered to be the Actuarial Value of Assets developed using procedures shown on the Actuarial Methods and Assumptions page in this report.

GASB No. 67 liabilities and ratios from the current and previous Actuarial Valuations are as follows:

<u>Valuation</u> <u>Year</u>	<u>Actuarial</u> <u>Liability</u>	<u>Plan</u> <u>Assets</u>	<u>Unfunded</u> <u>Liability</u>	<u>Funded</u> <u>Ratio</u>	<u>Benefit</u> <u>Rate</u>
2011	\$1,516,769	\$1,520,739	(\$3,970)	100.3%	\$235
2012**	1,621,278	1,549,305	71,973	95.6%	250
2013	2,054,607	1,775,654	278,953	86.4%	300
2014**	2,086,267	1,992,958	93,309	95.5%	300
2015	2,401,273	2,128,371	272,902	88.6%	350

\*\*Imputed based on prior year's results and year-end benefit rate

The Governmental Accounting Standards Board (GASB) issued a new statement Number 68 effective for periods starting after June 15, 2014, titled "Accounting and Financial Reporting for Pensions - An Amendment of GASB Statement No. 27" (GASB No. 68).

Measurement Date December 31, 2014

Previous Net Pension Liability	\$93,309
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Actuarial Variations	\$26,530
Change in Assumptions	0
Plan Amendments	288,476
Net Changes in Liability	315,006

Current Net Pension Liability	\$272,902
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1% Decrease in Rate to 5.00%	\$521,979
Current 6.00% Rate	\$272,902
1% Increase in Rate to 7.00%	\$64,395

# HISTORICAL SUPPLEMENTARY INFORMATION

Year Ended December 31	<u>2011</u>	<u>2012**</u>	<u>2013</u>	<u>2014**</u>	<u>2015</u>
Active Members	34	34	35	35	29
Inactive Members	36	36	35	35	38
Year-End Benefit Rate	\$235	\$250	\$300	\$350	\$350
Actuarial Discount Rate	6.00%	6.00%	6.00%	6.00%	6.00%
<u>Total Pension Liability</u>					
Previous Total Pension Liability	\$1,516,769	\$1,621,278	\$2,054,607	\$2,086,267	\$2,401,273
Service Cost	\$13,200	\$14,043	\$28,497	\$28,497	
Interest Cost	88,964	95,149	121,438	123,133	
Changes in Plan Benefits	96,815	423,020	0	288,476	
Actuarial Variations	0	0	0	0	
Changes in Assumptions	0	0	0	0	
Benefits Paid	( 94,470)	( 98,993)	( 118,275)	( 125,100)	
Net Changes in Pension Liability	\$104,509	\$433,219	\$31,660	\$315,006	
Current Total Pension Liability	\$1,621,278	\$2,054,497	\$2,086,267	\$2,401,273	
Value of Plan Assets	<u>1,549,305</u>	<u>1,775,654</u>	<u>1,992,958</u>	<u>2,128,371</u>	
Current Net Pension Liability	\$71,973	\$278,843	\$93,309	\$272,902	
Actuarially Determined Contribution	\$12,928	\$18,976	\$47,616	\$34,892	
Contributions Received	<u>130,480</u>	<u>130,830</u>	<u>101,400</u>	<u>159,603</u>	
Contribution Deficiency (Excess)	(\$117,552)	(\$111,854)	(\$53,784)	(\$124,711)	
Money-Weighted Rate of Return	(0.19%)	13.15%	14.48%	5.73%	

\*\*Imputed based on prior year's results and year-end benefit rate



## PENSION FUND PROVISIONS

Pension Funds for Fire Protection Districts are governed by Colorado Revised Statutes 31-30 Parts 1 through 10, key provisions of which that apply to Volunteer Fire Protection Districts are summarized below:

### Normal Pension

Age requirement:	Age 50, or older
Service requirement:	20 or more years of service
Benefit amount:	\$17.50 per month for each year of service not to exceed \$350.00

### Deferred Vested Pension

Age requirement:	Deferred to age 50, or older
Service requirement:	20 or more years of service
Benefit amount:	\$17.50 per month for each year of service not to exceed \$350.00

### Pre-Retirement Death Benefit

Age requirement:	None
Service requirement:	None
Benefit amount:	\$175.00 per month payable immediately to surviving spouse, dependent children or parents

### Post-Retirement Death Benefit

A married pensioner's surviving spouse will receive a monthly pension in an amount equal to 50% of the pension being paid at the date of the pensioner's death.

### Lump-Sum Death Benefit

A lump sum amount of \$1,000.00 is payable to the spouse or other beneficiary upon the death of any active or retired Member of the Pension Fund.

### Disability Retirement Benefit

A Member who is injured in the line of duty is entitled to a monthly Disability Benefit in an amount equal to \$150.00, payable for not more than 12 months. For periods of injury-related disability that last longer than 12 months, the Board of Trustees, in their discretion, can continue Disability Benefits in amounts that are necessary and proper.

### Credited Service

One year of Credited Service is granted for each Calendar Year after 1977 in which a Member completes at least 36 hours of training. Credited Service before 1978 is granted for each period of service to the Fire Protection District as a volunteer firefighter.

## ACTUARIAL METHODS AND ASSUMPTIONS

### Actuarial Methods

Actuarial Cost Method	Entry-Age Actuarial Cost Method
Asset Valuation Method	Market Value

### Economic Assumptions

Actuarial Funding Discount Rate	6.00% per annum compounded annually
Expense loading	None

### Demographic Assumptions

Mortality rates	1994 GAM rates - Modified
Turnover rates	Graduated rates by attained age
Retirement age	Age 50, after 20 years of service
Age difference	Males are 3 years older than females
Marital status	80% of all participants are married

### Sample Rates per 100 Members

	Inisex	Unisex
<u>Age</u>	<u>Mortality</u>	<u>Turnover</u>
25	0.00	8.88
30	0.00	6.89
35	0.00	4.00
40	0.00	1.65
45	0.00	0.73
50	0.00	0.29
55	0.00	0.00
60	0.00	0.00
65	1.45	0.00
70	2.37	0.00
75	3.72	0.00
80	6.20	0.00
85	9.72	0.00
90	15.29	0.00
95	23.36	0.00

## SUMMARY OF PENSION FUND ASSETS

### Investments

Cash and Cash Equivalents	\$ 128,045	6.02%
Pooled Funds	1,611,115	75.70%
Mutual Funds	389,210	18.29%
Accrued Interest	1	0.00%
Total Assets	<u>\$ 2,128,371</u>	<u>100.00%</u>

## RECEIPTS AND DISBURSEMENTS FOR PREVIOUS PLAN YEAR

### Receipts

#### Contributions

City and District	\$ 71,313	
State	88,290	
Other	0	
Total	<u>\$ 159,603</u>	

#### Investment Income

Income from all sources	16,274	
Other	0	
Total	<u>16,274</u>	

Realized Gains / (Losses) 30,979

Other Receipts 560

Total Receipts \$ 207,416

### Disbursements

Benefits Paid	\$ 125,100
Expenses and Fees	12,422
Other Disbursements	<u>0</u>

Total Disbursements \$ 137,522

### Reconciliation

Market Value Plan Year Beginning \$ 1,992,958

Net Cash Flow 69,894

Change in Asset Values 65,519

Market Value at Plan Year End \$ 2,128,371

### Rate of Return

Estimated Rate of Return for the Plan Year 5.73%

SUMMARY OF ACTIVE MEMBERS

Active <u>Member</u>	Birth <u>Date</u>	Service <u>Date</u>	<u>Age</u>	<u>Service</u>
Bizelli, Casey	9/5/1984	3/1/2012	30.3	2.8
Brack, Ben	1/5/1976	8/1/2014	39.0	0.4
Brown, Krystal	6/1/1994	9/1/2014	20.6	0.3
Brown, Tyler	4/16/1992	8/1/2014	22.7	0.4
Calkins, Shane	3/26/1991	5/1/2010	23.8	4.7
Castle, Kevin	2/23/1989	4/1/2015	25.9	0.0
Dobie, Charles "Cal"	5/31/1985	3/1/2012	29.6	2.8
Ferchau (Sethaler), Debbi	5/11/1969	1/1/1995	45.6	20.0
Ferchau, Hugo	6/19/1978	11/1/2001	36.5	13.2
Gydesen, Bob	5/16/1964	4/1/1991	50.6	23.8
Haus, Charles	8/10/1971	10/1/1997	43.4	17.3
Hughes, Rob	1/3/1978	8/1/2002	37.0	12.4
Kunze, Roger	4/14/1969	6/1/1994	45.7	20.6
McDermott, Dale	4/22/1981	2/1/2005	33.7	9.9
McDonough, Thomas	10/30/1980	2/1/2005	34.2	9.9
Messner, Matt	2/24/1975	7/1/2002	39.9	12.5
Randlett, Nico	4/13/1989	6/1/2013	25.7	1.6
Ricks, Joe	6/8/1970	9/1/1999	44.6	15.3
Rider, Shane	2/18/1966	4/1/1991	48.9	23.8
Rogers, Mellissa	11/29/1981	8/1/2003	33.1	11.4
Ross, Kevin	12/1/1959	5/1/2007	55.1	7.7
Ruehle, Joel	10/20/1978	5/1/2010	36.2	4.7
Smith, Heath	9/22/1975	8/1/2001	39.3	13.4
Spritzer, Dennis	10/2/1952	6/22/1981	62.2	33.5
Tomlin, Kenneth	9/3/1976	5/1/2010	38.3	4.7
Van Nurden, Joe	9/24/1981	4/1/2013	33.3	1.8
Vander Veen, Cory	1/14/1989	6/1/2013	26.0	1.6
Williamson, Jeff	3/18/1962	8/1/1994	52.8	20.4
Young, Ernest	4/6/1966	9/1/1993	48.7	21.3
Averages			38.0	10.8

SUMMARY OF RETIRED MEMBERS

<u>Inactive</u> <u>Member</u>	<u>Birth</u> <u>Date</u>	<u>Beneficiary</u> <u>Birth Date</u>	<u>Monthly</u> <u>Pension</u>	<u>Status</u>
Adamich, William F	7/26/1948	9/18/1951	350.00	Pensioner
Archuletta, Lawrence "Roy"	7/13/1938		350.00	Pensioner
Archuletta, Thomas E	2/18/1943	1/31/1947	350.00	Pensioner
Barz, Kim D	7/23/1953	10/13/1948	350.00	Pensioner
Beda, Bob	7/26/1951		350.00	Pensioner
Benson, James "Fred"	11/1/1942	11/1/1944	350.00	Pensioner
Cadwell, Steve	8/24/1952	7/22/1954	350.00	Pensioner
Calkins, Don	10/1/1935	1/3/1937	350.00	Pensioner
Cave, Melvin D	12/11/1937	10/17/1942	350.00	Pensioner
Chapman, James L	4/26/1926	7/17/1927	350.00	Pensioner
Cranor, Walt	7/1/1952		350.00	Pensioner
Czillinger, Robert F	7/9/1938		350.00	Pensioner
Demuth, Gary	7/21/1951	5/18/1957	350.00	Pensioner
Eastman, Brent S	2/1/1961	4/27/1956	350.00	Pensioner
Follman, Kenneth R	9/12/1955	2/9/1963	350.00	Pensioner
Formaz, Richard L	3/19/1952	12/6/1954	350.00	Pensioner
Fry, Darrell S	2/7/1960	1/15/1964	350.00	Pensioner
Gazzoli, William E	8/12/1950	1/11/1950	350.00	Pensioner
Hansen, William R.	4/18/1948	9/2/1950	350.00	Pensioner
Harris, David L	2/3/1951	12/29/1953	350.00	Pensioner
Harris, Robert J	3/9/1950	12/24/1950	350.00	Pensioner
LeMay, Larry W	11/8/1941		350.00	Pensioner
Lucas, Bruce	4/7/1954	3/16/1963	350.00	Pensioner
Martin, Eddie J	2/1/1939	11/26/1938	350.00	Pensioner
Martin, Larry D	8/20/1958	1/11/1961	350.00	Pensioner
McConnell, Shawn	3/21/1963		350.00	Pensioner
McDermott, Norman "Jim"	3/15/1944	3/7/1955	350.00	Pensioner
McKenna, Daniel W	4/9/1953	10/26/1953	350.00	Pensioner
Meldrum, Steve	4/23/1948		350.00	Pensioner
Miles, Harry F	2/28/1933	5/12/1932	350.00	Pensioner
Miles, Jim	11/11/1961		350.00	Pensioner
Sampson, George "Mike"	10/19/1948	10/31/1955	350.00	Pensioner
Shaw, Michael J	2/3/1950		350.00	Pensioner
Starkebaum, Curtis C	4/1/1923		350.00	Pensioner
Tillman, Cleo V	4/1/1926		350.00	Pensioner
Williams, Stephen R	11/28/1949	11/9/1954	350.00	Pensioner
Coupe, Thomas J (Rose)	6/3/1926		175.00	Beneficiary
Buffington, Dan	8/17/1965	8/21/1973	350.00	Deferred

## GLOSSARY

To gain a better understanding of the results contained in this report, descriptions of key actuarial concepts used in this report are outlined below:

### Present Value

Lump sum amount of a payment or series of payments payable in the future determined by discounting such payments at a predetermined rate of interest and the probability of making such payments.

### Actuarial Cost Method

Technique for establishing the amount and incidence of pension plan costs by dividing such costs into past service and future service elements.

### Entry-Age Actuarial Cost Method

An Actuarial Cost Method that determines Normal Cost as a level amount that is payable each year from the non-retired participant's entry age to retirement age. Actuarial costs arising from experience deviations are recognized as changes in Unfunded Actuarial Liability.

### Normal Cost

Cost assigned for each non-retired participant, under the Entry-Age Actuarial Cost Method, to each year between the participant's entry age and retirement age.

### Actuarial (Accrued) Liability

The difference, on the valuation date, between the Present Value of Future Benefits and the Present Value of Future Normal Costs, representing the accumulated actuarial cost, under the Entry-Age Actuarial Cost Method, assigned to years before the valuation date.

### Unfunded Actuarial (Accrued) Liability

The difference, on the valuation date, between the Total Actuarial Liability and the Actuarial Value of Plan Assets, representing the net plan cost, under the Entry-Age Actuarial Cost Method, assigned to years before the valuation date.

### Funding Requirement

An amount equal to the sum of the total Normal Cost for all non-retired participants, plus a level dollar amount to amortize any Unfunded Actuarial Liability over a fixed period of years from the valuation date.

## GLOSSARY

(Continued)

### Actuarially Determined Contribution (ADC)

A measure of the periodic contribution to a defined benefit Plan, calculated from the values developed by using one of the prescribed actuarial cost methods of GASB No. 67, and includes the Normal Cost plus an amortization charge to recognize any Unfunded Actuarial Liability over a period of not less than 10 years nor more than 30 years.

### Actuarial Value of Assets

A three-year moving average of expected and actual market values determined by projecting an expected market value based on the assumed investment return and the cash flow net of expenses. The difference between the projected value and the actual market value is the investment gain or loss for the year. The Actuarial Value of Assets is the actual market value less any deferred gains and losses from the three previous years. The Actuarial Value can not be less than 80% of the actual market value, nor more than 120% of the actual market value.

### Actuarial Assumptions

Statistical representation of future experience for census under consideration, which may include expectations regarding interest rate, mortality, disability, turnover and other related contingencies that have a material effect on benefits being valued.

Assumptions used should smooth emerging benefit program costs so that year-to-year results are stable and predictable. For groups with fewer than 3,000 members, complicated assumptions produce more cost instability than simplified assumptions. More simplified assumptions have been employed for this valuation which should lead to better actuarial cost stability.